Comments of the Natural Resources Defense Council (NRDC)
on the CPUC and CEC Joint Workshop:
"Natural Gas Market Outlook 2006-2016"

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1. Introduction and Summary

On October 31st, the California Public Utilities Commission (CPUC) and the California Energy Commission (CEC) issued a notice for a joint workshop entitled "Natural Gas Market Outlook 2006-2016." NRDC appreciates the opportunity to offer these comments on the questions posed in the agenda outline for the joint workshop on December 9 and 10.

We commend the Commissions for working together to take a comprehensive look at California's future natural gas needs, including opportunities to reduce California's natural gas demand. Recent concerns about the adequacy of natural gas supplies, storage and pipeline capacities, coupled with rising and volatile natural gas prices, highlight the increased importance of energy efficiency and renewable resources to ensure that California's future energy service needs can be met in an environmentally responsible manner at an affordable cost.

Our comments address the following key points:

- Energy efficiency and renewable resources can cost-effectively reduce demand for natural gas, while reducing customer bills and pollution emissions.
- Current efforts to reduce demand for natural gas have been very effective, but many more cost-effective opportunities remain.
- California should pursue more ambitious efforts to reduce natural gas demand through cost-effective electric and natural gas energy efficiency and increased use of renewable energy.
- The CPUC's new natural gas proceeding should authorize increased investments in, and a cost-recovery mechanism for, natural gas efficiency programs. These issues are currently orphans in need of a home at the CPUC.

2. Energy efficiency and renewable resources can cost-effectively reduce demand for natural gas, while reducing customer bills and pollution emissions.

As the agenda outline aptly notes, there are many strategies California can pursue to reduce demand for natural gas in order to avoid costly infrastructure investments and lower customer bills. These strategies include reducing demand through natural gas efficiency programs and standards, and indirectly reducing demand for gas by reducing electricity consumption through electric efficiency programs and standards and by increasing renewable generation. Because electric generation is the fastest growing sector of natural gas consumption, all of these strategies

are effective at reducing natural gas demand.[1] And as we discuss below, all of these options are cost-effective and could save consumers billions of dollars.

3. Efforts to reduce demand for natural gas have been very effective.

For the past quarter century, California has pursued several strategies to reduce natural gas and electricity demand. By any measure, these strategies have been extremely effective:

- By 2001, cumulative natural gas savings from natural gas efficiency programs, building and appliance standards totaled about 0.32 trillion cubic feet per year, or 13% of total statewide annual consumption (including gas used for electricity generation).[2]
- Electric efficiency programs, building and appliance standards have avoided the need to build 10,000 MW of generation, equivalent to 20 giant power plants, many of which would have been fueled by natural gas.[3] The cumulative energy savings totaled 35,000 GWh in 2001, or about 14% of the electricity consumed in California.[4]
- Renewable resources provided 27,800 GWh of electricity in 2001, or 11% of the electricity consumed in California.[5]

If California had not pursued these natural gas saving opportunities, gas consumption would be much higher in California today. For example, if California had not pursued any energy efficiency or renewable energy efforts, and assuming only *half* of the energy provided by electric efficiency and renewable energy were provided by natural gas-fired power plants instead, California's natural gas consumption would be about 25% higher than it is today.[6]

4. Abundant opportunities to cost-effectively reduce demand for natural gas remain.

Although California has led the nation in its efforts to increase natural gas end-use efficiency, electric-energy efficiency, and renewable energy generation, many more opportunities to cost-effectively reduce demand for natural gas through these strategies remain. A recent analysis by the American Council for an Energy-Efficient Economy (ACEEE) and Energy and Environment Analysis shows that nationwide efforts to expand energy efficiency and renewable energy could

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[1] California Energy Commission Draft Final Commission Report, *Electricity and Natural Gas Assessment Report,* Publication # P100-03-014, October 2003, p. 37.

[2] Statewide natural gas consumption is 2.4 trillion cubic feet per year (including gas used for electricity generation). Kema-Xenergy Inc., *California Statewide Commercial Sector Natural Gas Energy Efficiency Potential Study*, for PG&E, Study ID #SW061, May 2003.

[3] California Energy Commission Draft Final Commission Report, *Public Interest Energy StrategiesReport,* Publication # 100-03-012C, October 10, 2003, p. 39.

[4] Ibid.

[5] Ibid, p. 89.

[6] The CEC reports that in-state natural gas-fired power plants consumed 0.8 trillion cubic feet of gas to generate 90,900 GWh of electricity in 2002. (CEC, *supra* at note 1; CEC, *California Gross System Power for 2002,* www.energy.ca.gov/electricity/gross_system_power.html) Using the same ratio of gas consumed to electricity generated, half of the electricity provided by efficiency and renewable resources (or 31,400 GWh) would have consumed 0.28 trillion cubic feet of natural gas per year. Combined with the 0.32 trillion cubic feet per year of savings from natural gas efficiency efforts, California's total natural gas consumption absent efficiency and renewable energy efforts would have totaled about 3 trillion cubic feet per year.

reduce natural gas consumption by 4% over the next five years, thereby reducing gas prices by 20% and saving consumers $75 billion.[7] The savings for Californians alone would reach more than $8 billion.

Opportunities to Increase Natural Gas Efficiency

Voluntary programs and mandatory standards targeted specifically at improving the efficiency of end-uses of natural gas (e.g., water heaters and furnaces) can provide additional cost-effective natural gas savings for Californians. While a comprehensive assessment of the potential for cost-effective natural gas efficiency improvements in California has not been completed, recent studies of the potential in the residential and commercial sectors alone indicate that savings of 50 million therms per year would still be far short of the total savings potential.[8] These investments would provide net benefits to California consumers of nearly $600 million.

Opportunities to Increase Electric-Energy Efficiency

A recent report by Xenergy demonstrates that California has numerous opportunities to take advantage of additional cost-effective electric-energy efficiency resources.[9] The report finds that California could *quadruple* annual investments in energy efficiency and still not exhaust the pool of available energy efficiency resources that are cheaper than generation alternatives. The potential benefits of increasing energy efficiency investments for California's economy and environment are impressive. The report estimates that if California were to approximately quadruple statewide investments in energy efficiency, the state could:

- Reduce demand by 5,900 MW over the next ten years–avoiding the need to build about eleven large power plants, most of which would have been fueled by natural gas; and
- Return an estimated $12 billion in net benefits to Californian's pocketbooks.

Opportunities to Increase Renewable Energy Generation

The CEC reports that the technical potential for renewable generation in California is 262,000 GWh per year, or more than the state's entire consumption of electricity.[10] Of course, California uses electricity generated throughout the Western Electricity Coordinating Council and the

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[7] Elliott, R.N. et al, *Impacts of Energy Efficiency and Renewable Energy on Natural Gas Markets*, American Council for an Energy-Efficient Economy, September 7, 2003.

[8] For the residential and commercial sectors alone, which make up half of the end-use consumption of natural gas in California (excluding electricity generation), the *achievable* potential for cost-effective natural gas efficiency improvements is nearly 450 million therms per year, at the end of ten years, or 45 million therms per year. Assuming the other sectors have similar levels of energy efficiency potential savings, the total potential is likely to be in the ballpark of 90 million therms per year. Note that 1 therm = 100 cubic feet of gas. F. Coito and M. Rufo, *California Statewide Residential Sector Energy Efficiency Potential Study,* Kema-Xenergy Inc., for PG&E, Study ID #SW063, April 2003 (available at www.calmac.org <http://www.calmac.org>; Study ID #10023 and 10024); Kema-Xenergy Inc., California Statewide Commercial Sector Natural Gas Energy Efficiency Potential Study, for PG&E, Study ID #SW061, May 2003.

[9] M. Rufo and F. Coito, *California's Secret Energy Surplus: The Potential for Energy Efficiency,* Xenergy Inc., for the Energy Foundation and the Hewlett Foundation, 2002 (www.energyfoundation.org/energyseries.cfm).

[10] California Energy Commission, *Renewable Resources Development Report,* Publication # 500-03-080F, November 2003, p. 4.

technical potential for the region as a whole exceeds 3.7 million GWh per year.[11] The potential to increase renewable energy generation, from the 27,800 GWh of renewable electricity currently supplied to California consumers, is clearly substantial.

5. California should pursue more ambitious efforts to reduce natural gas demand.

Several statements of California policy should guide the CPUC and CEC joint workshop and the subsequent CPUC proceeding. First, California law, in Public Utilities Code § 701.1 (b), states that "electrical and natural gas utilities should seek to exploit all practicable and cost-effective conservation and improvements in the efficiency of energy use and distribution that offer equivalent or better system reliability, and which are not being exploited by any other entity." Second, the joint agencies' Energy Action Plan places maximizing energy efficiency and renewable energy at the top of the agencies' list of prioritized actions to meet their goal of ensuring that "adequate, reliable, and reasonably-priced electrical power and natural gas supplies…[are] provided through policies…that are cost-effective and environmentally sound for California's consumers and taxpayers."

The CPUC and CEC have taken significant steps to increase procurement of electric-energy efficiency resources and renewable resources. NRDC applauds the Commissions for these efforts, which include:

- The CPUC directed the utilities to consider investment in "all cost-effective energy efficiency" in their long-term electric-resource procurement plans.[12] And the CPUC's recent proposed decision approves the utilities' proposals to increase electric-energy efficiency investments by more than 40% over the next two years, thereby increasing electricity demand savings by 75%.[13] If the proposed decision is approved, the programs overseen by the CPUC over the next two years will save 770 MW, avoiding the need to build two medium-sized power plants. The CPUC's proposed decision also notes that additional cost-effective resources will still remain untapped. NRDC urges the CPUC to continue pursuing those untapped resources.
- The CEC's *Integrated Energy Policy Report* urges the state to increase funding for cost-effective electric-energy efficiency to achieve at least 2,500 MW of peak demand savings by 2008, avoiding the need to build five large (and most likely natural gas-fired) power plants.[14] The CEC and CPUC plan to jointly set statewide electricity saving targets, through the CPUC's energy efficiency proceeding (R.01-08-028). NRDC urges the Commissions to set aggressive but achievable targets.
- The CPUC and CEC are implementing the state's Renewable Portfolio Standard (RPS), which aims to have renewable resources supply 20% of the state's electricity by 2017. In addition, the CEC is urging the Legislature to accelerate the target date for the RPS goal from 2017 to 2010, and to set a more ambitious target for 2020.[15] NRDC urges the Commissions to complete implementation of the RPS as one of their

[11] Ibid.
[12] *California Public Utilities Commission Decision No. 02-10-062, October 2002.*
[13] CPUC, Proposed *Interim Opinion*, R.01-10-024, November 18, 2003.
[14] California Energy Commission Draft Final Commission Report, *2003 Integrated Energy Policy Report,* Publication # 100-03-019DF, October 2003, p. v.
[15] Ibid, p. vi.

top priorities, and supports the CEC's proposal to accelerate the target date for the RPS.

While both Commissions have been making great strides in pursuing opportunities to cost-effectively increase electric-energy efficiency and renewable generation, little progress has been made in the area of natural gas efficiency. Investments in natural gas efficiency are less than half the level of a decade ago, and nearly an order of magnitude lower than two decades ago.[16] And while programs today save about 20 million therms per year, at their height, the programs were saving more than 150 million therms per year.[17] While it is clear that there are significant opportunities to take advantage of additional efficiency investments, as we discussed above, the state's understanding of the potential for cost-effective natural gas efficiency investments remains incomplete. NRDC urges both Commissions to focus additional attention on ensuring that California meets the requirements of Public Utilities Code § 701.1 (b) to exploit all cost-effective natural gas efficiency, for the benefit of California consumers and the environment.

6. The CPUC's new natural gas proceeding should authorize increased investments in, and a cost-recovery mechanism for, natural gas efficiency programs.

In 2000, the Legislature passed Assembly Bill (AB) 1002, which established a surcharge on all natural gas consumed in California to fund public purpose programs, including cost-effective energy efficiency. The bill requires the CPUC to "annually determine the amount of money required for the following year to administer [the natural gas public purpose programs]."[18]

The existing natural gas surcharge level does not fully address state policy requirements with regard to natural gas efficiency. Current funding levels for natural gas energy efficiency were *not* established based on cost-effective potential, but on the drastically reduced funding levels that resulted from the uncertainties and pressure of restructuring. As we discussed above, the current level of natural gas efficiency funds are inadequate to harness all cost-effective energy efficiency potential. Any additional investment in these cost-effective programs, will reduce customer costs, not increase them, and the CPUC clearly has authority to increase these investments. The Commission should establish a forum to investigate the appropriate level of funding for cost-effective natural gas efficiency programs and to authorize increased investments.

These issues have fallen through the cracks at the CPUC in recent years, and are not being addressed in any of the Commission's proceedings. While the energy efficiency proceeding (R.01-08-028) addresses both electric and natural gas energy efficiency programs, the scope of the proceeding does <u>not</u> include any evaluation of the appropriate level of funding for these programs. The proceeding simply assumes current funding levels and develops programs within that constraint. And even though the energy efficiency proceeding plans to establish energy

[16] The PUC's recent Decision 03-08-067 notes natural gas energy efficiency funding is about $45 million per year. In the early 1990's, natural gas efficiency investments were about $175 million per year (in $2002). In the mid-1980's, these investments nearly reached $400 million per year (in $2002). (Kema-Xenergy Inc., *California Statewide Commercial Sector Natural Gas Energy Efficiency Potential Study,* May 2003, p. 3-3.)
[17] Ibid, p. 3-4.
[18] California Public Utilities Code Section 890 (d).

saving targets for both electricity and natural gas, jointly with the CEC, the proceeding will not be authorizing increased investments in order to achieve those targets. For electric-energy efficiency, the investment level is being authorized in the procurement proceeding (R.01-10-024), but the appropriate investment level for natural gas efficiency is not currently being addressed by the CPUC.

The CPUC's Order Instituting Rulemaking (OIR) on the natural gas surcharge established in AB 1002 (R.02-10-001) similarly is not addressing how much funding the natural gas efficiency programs should receive. Although the Commission initially included this issue in the scope of the proceeding, and NRDC provided comments on the importance of addressing this issue, the CPUC subsequently dropped it from the scope of the proceeding.[19] The Assigned Commissioner's Ruling determining the scope of the proceeding states: "Certain comments from parties suggested that implementation workshop issues should include determination of public purpose program (PPP) ratemaking matters including adjustments to existing PPP accounts...However, these matters are being addressed in other proceedings and are not within the scope of this proceeding."[20] But this statement is incorrect with regards to funding for natural gas efficiency programs. The issue of the appropriate level of funding for cost-effective natural gas energy efficiency is not currently being addressed by the CPUC in any proceeding.

The notice for the CPUC and CEC joint workshop on natural gas indicates that the CPUC intends to open a new proceeding on natural gas issues in early 2004. NRDC urges the CPUC to authorize increased investments in, and a cost-recovery mechanism for, natural gas efficiency programs in this new proceeding. The Commission should ensure that natural gas efficiency programs are established to meet the target savings that will be set in the energy efficiency proceeding (R.01-08-028), in order to significantly reduce wasteful and inefficient uses of gas. Strong natural gas efficiency programs are necessary to guard against unnecessary air pollution and to save energy consumers money.

[19] Carter, S., *Comments of the Natural Resources Defense Council on the Natural Gas Surcharge to Fund Public Purpose Programs,* R.02-10-001, November 12, 2002; Carter, S., *Comments of the Natural Resources Defense Council on the List of Issues to be Covered in the Workshops in the Natural Gas Surcharge Proceeding,* R.02-10-001, February 14, 2003.

[20] CPUC, *Assigned Commissioner's Ruling Determining the Category, Need for Hearing, Scope, and Schedule of this Proceeding,* R.02-10-001, April 22, 2003.